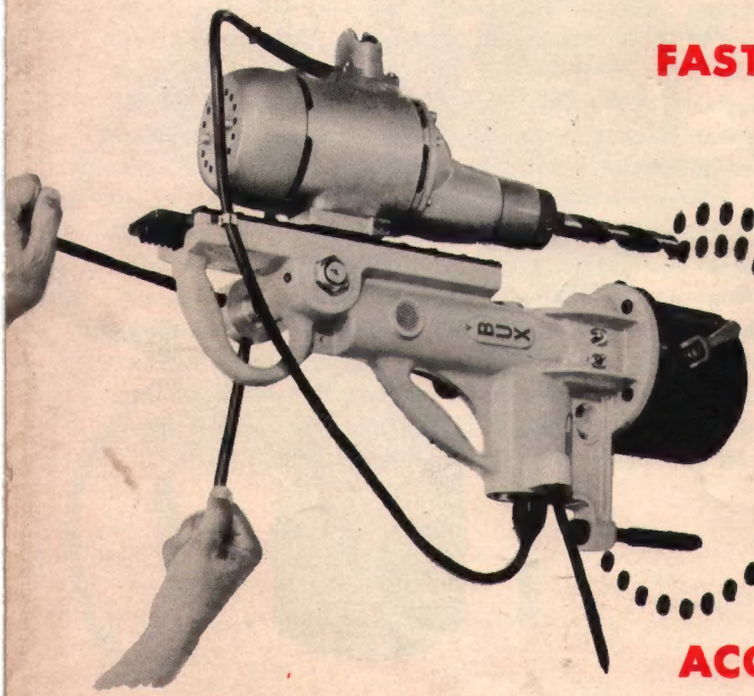
BUX MAGNETIC PRODUCTS, INC.

1355 North Tenth Street *San Jose 12, California*



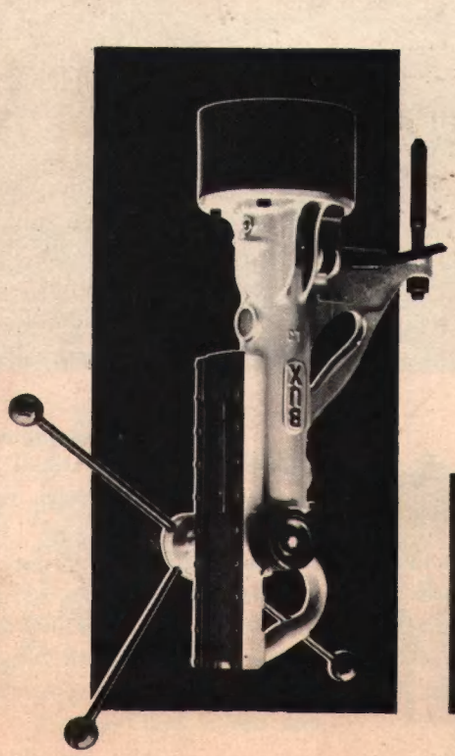
FAST

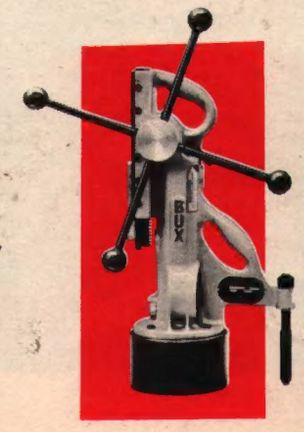
SAFE

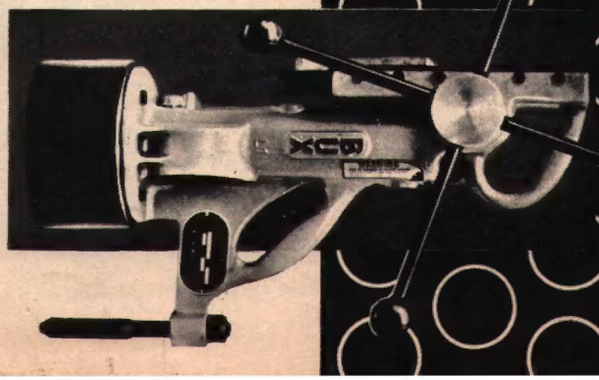
ACCURATE

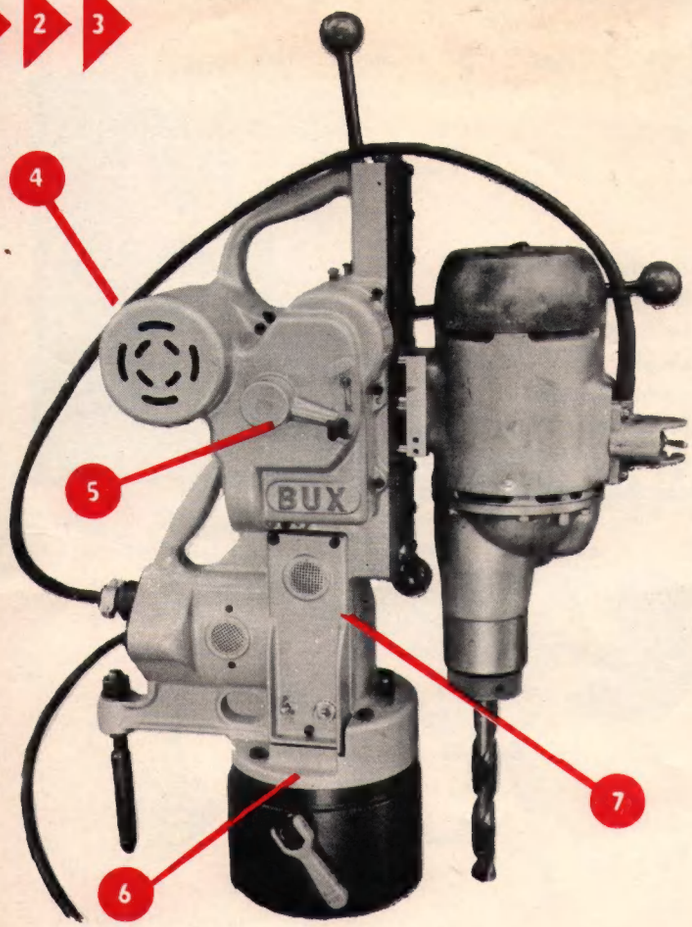
BUX

magnetic products

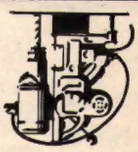




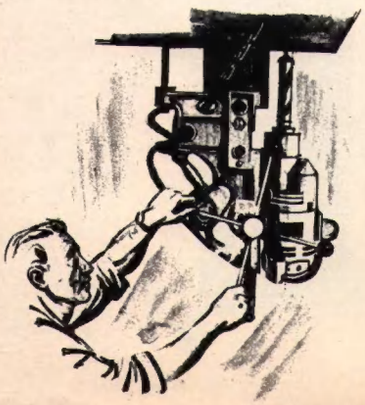


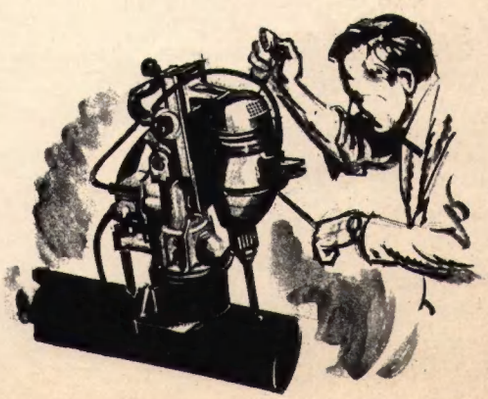


BUX-MATIC

lightest weight heavy duty magnetic drill press on the market.			1
adaptable to all makes of drills—air and electric.			2
3			most comple line of mag- netic drill presses on th market.
heavy duty motor pro- duces maximum drill point pressure of 1500 pounds.			4
two speed automatic feed for all types of metal drilling.			5
6		radial positioner	with exclusive cam action for lateral movement.
unique one piece post casting		7	assures maxi- mum rigidity under all conditions.

DRILLS ADAPTABLE ELECTRIC	DRILLS ADAPTABLE AIR	TAPPING CAPACITY	HEIGHT	BASE DIAMETER	WEIGHT (Less Drill) (LBS.)	MAX. MAGNETIC PULL (LBS.)	MAX. DRILL POINT STROKE PRESSURE (LBS.)	CURRENT DRAW (Watts)	MAX. STROKE	TURING RAD.	LATERAL
1/4" - 5/8"	1/4"-1"	3/8"-3/4"	19 1/2"	6"	36	1600	800	43	10"	—	—
1/2"-7/8"	1/2"-1"	1/2"-5/8"-7/8"	19 1/4"	6"	38	2000	1400	45	10"	—	—
3/4"-1 1/4"	1"-1 3/4"	5/8"-3/4"-1 1/4"	24"	6 3/4"	51	3000	2000	60	13"	—	—
1/2"-7/8"	1/2"-1"	1/2"-7/8"	20"	6"	43	1850	1250	45	10"	330°	7/8
3/4"-1 1/4"	1"-1 3/4"	5/8"-1 1/4"	24 3/4"	6 3/4"	57	2700	1850	60	13"	330°	1 1/8
1/2"-1 1/4"	1/2"-1 3/4"	5/8"-1 1/4"	24"	6 3/4"	70	3000	2000	150	12 1/2"		
1/2"-1 1/4"	1/2"-1 3/4"	5/8"-1 1/4"	25"	6 3/4"	77	3000	2000	150	12 1/2"	330°	1





BUX magnetic products

BUX ELECTRO-MAGNETIC DRILL PRESS

MODEL L-2RP AND L-3RP

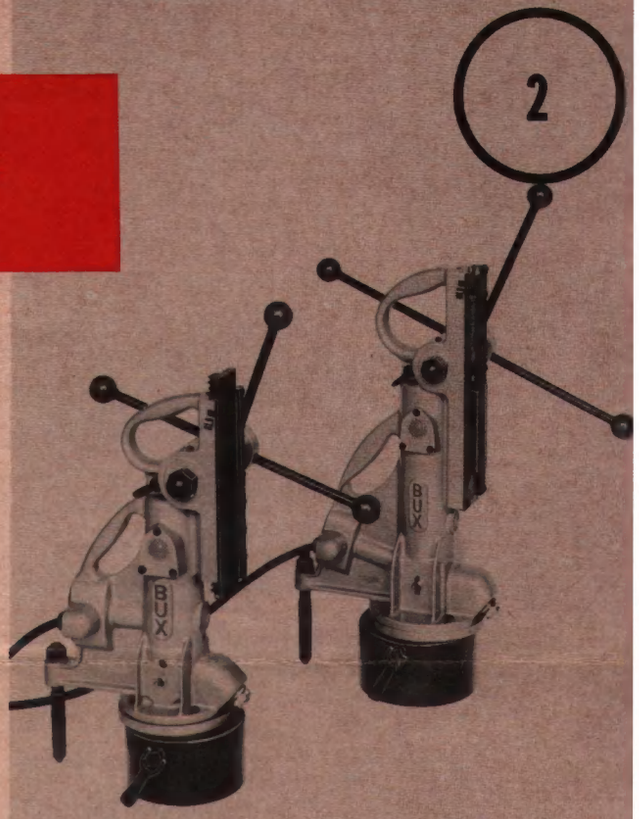
The BUX Electro-Magnetic Drill Press has been designed specifically for converting a portable electric or air drill to a portable, precision drill press. The heart of the unit is a powerful electro-magnet that holds the drill press securely in place for drilling in any position. The radial-positioner units (designated "RP") are designed to swivel through 330 degrees of radial motion. In addition, there are 7/8 inches of allowable lateral adjustment in the L-2RP unit; 1-1/8 inches in the L-3RP unit. A simple locking cam and friction disc permits full adjustment and provides a positive lock when the drill has been properly positioned.

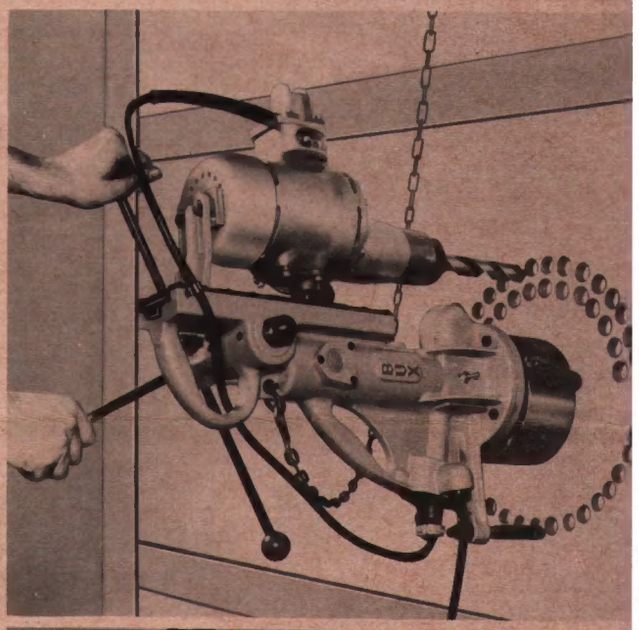
The Model L-2RP is designed for use with electric and air drills up to 1-inch capacity, while the Model L-3RP unit is for use with electric and air drills up to 1-3/4 inches capacity. In all other respects, the two models have the same mechanical characteristics.

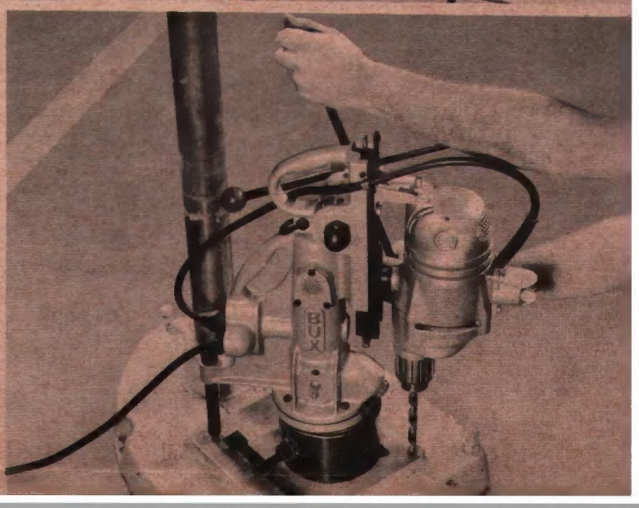
The drill does not have to be altered to be attached to the drill press. It is only necessary to remove the drill handles and use the handle mounting holes for attaching the drill to the drill stand. Drill mounting kits are available for mounting most types of drills up to 1-3/4 inches. Buck Mfg. Co. will design drill mounting kits for any special applications upon request. A switch box assembly is available to replace spade handles when permanent conversion is desired.

Every consideration has been given to the protection of your drilling and cutting equipment. The adjustable stabilizer leg, as indicated in the illustrations, provides two-point suspension to insure that the drill is held squarely and in perfect alignment at all times. In the radial-positioner models, the stabilizer will swivel as the drill is positioned so that it will always remain exactly opposite from the drill bit. This feature insures balanced torque and thrust pressures, and is equally effective in all drill positions. The equipment will operate from 120 volts ac, 24 to 400 cycles, or from 120 volts dc. Both the L-2RP and the L-3RP are also available in 220-volt models.

Less than two feet of operating space is required, plus just enough room for the operator to apply pressure to the operating feed handle. The operator has only to position the drill, flip a switch, and the press is magnetically locked into place for the remainder of the drilling operation. Fine adjustment and radial positioning is obtained by simply releasing the locking cam in the body of the magnet.







ASSEMBLY

The BUX Electro-Magnetic Drill Press is shipped completely assembled except for the four feed handles, the stabilizer leg and knurled nut and the drill adapters. Refer to Figure 1 and assemble the drill press as follows:

1. Screw in the four feed handles.

2. Screw in the stabilizer leg until it is approximately even with the base of the magnet, and attach the knurled nut.

3. The Drill Mounting Kit, which is provided with the BUX Drill Press, contains the torque attachment bracket, the top bracket, and the adapter bracket(s). The top bracket should first be secured in place at the upper end of the slide on the drill press. Remove the pipe handle from the drill and connect the torque attachment bracket to the drill body. Enter the square end of the torque attachment bracket into the slide assembly and raise the drill until the drill motor (or adapter bracket) is against the top bracket. If no adapter bracket is required, screws will be supplied with the adapter bracket for attaching to the top bracket. To align the drill motor, place a drill rod in the chuck and, with the magnet energized on a flat surface, adjust drill until drill rod is vertically accurate.

4. Bring the drill power cord around the drill press opposite the feed handles and plug it into the receptacle at the rear of the drill press. If the drill has a long power cord, roll the excess cord and tie it to the right-hand side of the top carrying handle. For permanent installations, cut the drill power cord to the proper length.

OPERATION

The BUX Electro-Magnetic Drill Press may be operated in any position - vertical, horizontal, or inverted. Before attempting to operate the drill press, however, you must understand the following principles of operation.

DRILLING THIN AND NON-FERROUS MATERIAL . . . . The electro-magnet contained in the drill press operates at its nominal gripping power on material 1/2-inch or more thick, as shown in the graph below. To drill thin or non-ferrous material, simply place a 1/2-inch thick plate against the back of the material. This plate should be 6 by 6 inches or larger. When the magnet is energized by turning on the switch, the plate and the drill press will be held securely in place.

APPLYING PRESSURE . . . . An electro-magnet has direct pulling action. It may be tipped or "walked" out of position if pressure is applied at an angle or in a twisting action. If you apply pressure to the feed handles directly in line with the drill bit, however, you are working with the magnet and may actually increase its pull-off strength. When starting the drill, use light pressure until a full cut is obtained, then increase the pressure just enough to keep the drill cutting evenly.

SURFACE . . . . It is NOT necessary to have a clean, smooth, or unpainted surface to operate the press. However, for drilling large holes without a pilot hole, remove any loose rust, grime, or dirt in order to assure maximum drill point pressure.

ENERGIZING THE ELECTRO-MAGNET . . . . Place the drill press on the material to be drilled near the punch mark. Turn the power switch ON. This applies full power to the magnet coil.

RADIAL POSITIONING . . . . With the drill press held firmly in position on the material to be drilled, simply loosen the locking cam by rotating the handle on the side of the magnet. The drill press is then easily turned through 330 degrees and can be positively locked in any position by tightening the handle. The handle will also release the drill press for maximum lateral (fore and aft) movement.

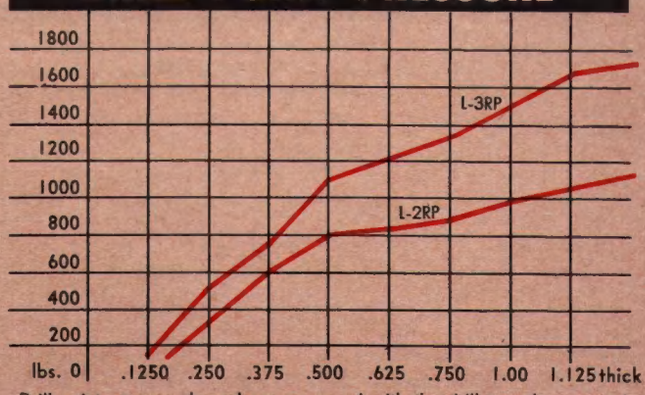
DRILLING ON ROUND SURFACES . . . . When drilling on round surfaces such as pipe, place the drill press on the material to be drilled near the punch mark and turn the switch on. Position the drill radially as described above. Place a 1/2-inch thick plate under one side of the magnet and against the material as shown in Figure 2. This will allow the press to operate in the same manner as when drilling on flat surfaces.

DRILLING IN HORIZONTAL OR OVERHEAD POSITIONS . If drilling in a horizontal or overhead position, hold the press with your left hand on the magnet switch. Hold the press with your right hand on the pinion shaft hub

SPECIFICATIONS

	L-2RP	L-3RP
height	20 inches	24-¾ inches
base diameter	6 inches	6¾ inches
weight, less drill	43 pounds	57 pounds
magnetic pull (max.)	1650 pounds	2500 pounds
drill point pressure (max.)	1150 pounds	1800 pounds
stroke travel	10 inches	13 inches
power requirements	45 watts approx 120 volts ac/dc (24 to 400 cps)	60 watts approx 120 volts ac/dc (24 to 400 cps)

DRILL POINT PRESSURE



Drill point pressures have been measured with the drill exactly centered with respect to its fore and aft movement. There will be some slight variation in the figures as the drill is positioned along its lateral axis.

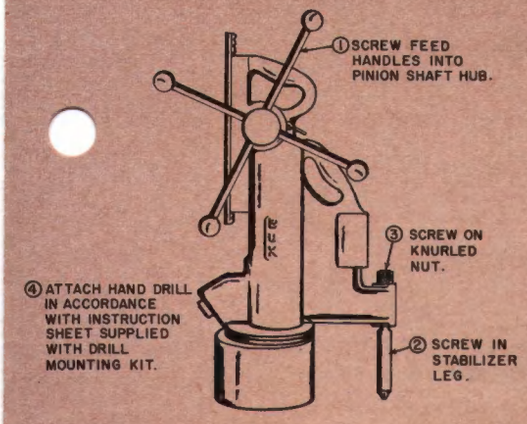


Figure 1

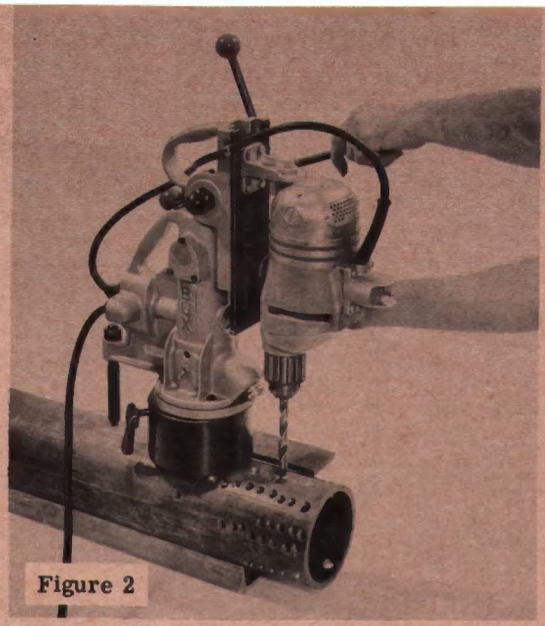


Figure 2

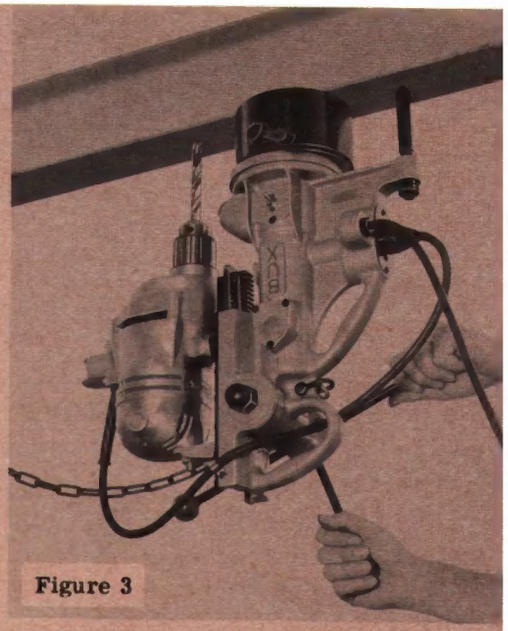


Figure 3

so that a twist of the wrist will move the drill bit in and out enough to locate the bit on the punch mark. Place the drill press near the punch mark and turn on the magnet switch. Position the drill radially. ALWAYS USE A SAFETY CHAIN OR CABLE, AS SHOWN IN FIGURE 3. WHEN DRILLING IN OVERHEAD POSITIONS. If the power source fails, the press will drop. The safety chain should be positioned so that the press would drop away from the operator.

OPERATING SEQUENCE

1. Place the press on the material to be drilled.

2. Turn on the magnet switch.

3. Loosen the radial positioning handle and locate the drill bit exactly on the punch mark.

4. Loosen the knurled nut and adjust the stabilizer leg to come into firm contact with the material being drilled and hand-tighten the knurled nut.

5. Turn on the drill and apply pressure lightly to the feed handles in direct line with the bit until a full cut is obtained, then increase pressure to complete the drilling.

SERVICE AND MAINTENANCE

LUBRICATION . . . .Oil all moving and sliding surfaces on the drill stand daily with a few drops of high grade motor oil. To oil the pinion shaft bushings, remove the two oil hole screws located directly above the centerline of the pinion shaft and put a few drops of oil in each hole. Always replace the screws. Oil the contacting surfaces on the slide and rack by moving the slide to the extreme up and down position.

DISASSEMBLY . . . . Remove the drill and disconnect it from the drill press before starting disassembly.

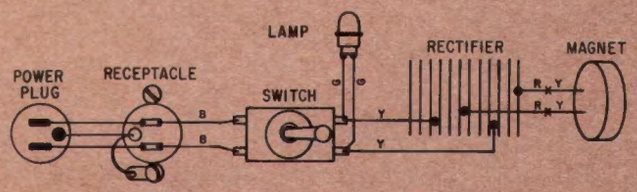
PINION SHAFT . . . . Remove the cap nut on the end of the pinion shaft. Pull the pinion shaft (with the pinion gear) out of the drill post.

SLIDE AND RACK . . . . Remove the stop screw from torque bar. Pull the slide and rack up until it comes out of the retainer bars and drill post.

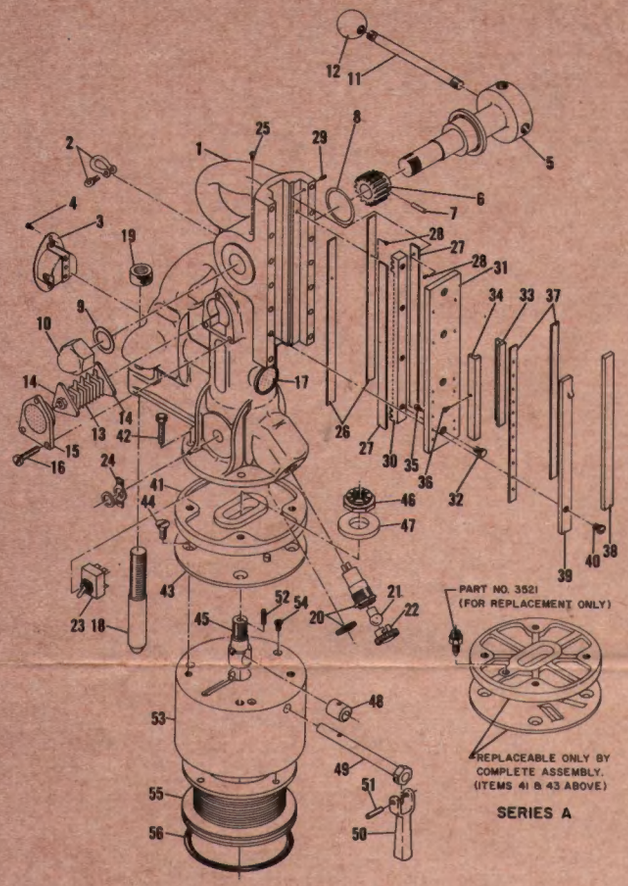
DRILL POST AND ELECTRICAL COMPONENTS . . . . Remove the four cap screws holding the drill post to the magnet pole piece. Facing the front (slide) of the drill press, lean the drill post to the left, keeping it close to the magnet so as not to place a strain on the wires running between the post and the magnet. With the post lying on its side, disconnect the two wires running between the post and the magnet. The magnet and swivel assembly will be released from the press for further disassembly. Unscrew the nut on the pilot light assembly and on the magnet switch assembly, both of which are on the outside of the drill post. Remove the drill cord receptacle and disconnect the wiring. Remove the strain clip on the power input cord for the drill press and pull the cord out of the drill post. Remove the vent cap assembly (item 12), pull out the rectifier, and disconnect wiring to the rectifier terminals. Slip magnet switch assembly, pilot light, and wiring out of the drill post.

RADIAL POSITIONER ASSEMBLY . . . . Remove the locking nut from the aligning stud on top of the pole piece and lift off the washer and dead plate. Remove four recessed screws securing the wear plate to the pole piece and lift off the wear plate. The cam and shaft assembly is held in place within the aligning stud by a roll pin which extends through both the cam and the shaft. The roll pin is accessible through the hole in the aligning stud and can be driven out with a thin drift punch. Remove the shaft and lift out the aligning stud, cam, and roll pin.

ELECTRO-MAGNETIC COIL . . . . Remove the three flat head screws on top of the magnet pole piece. Hold the magnet pole piece suspended a few inches above the bench with the top side up. If the coil spool does not drop out, tap the bottom center of the magnet pole piece with a babbit hammer.



MODEL L WIRING



REASSEMBLY . . . . The drill press is reassembled in the reverse order to which it was disassembled. IN REASSEMBLY, DO NOT USE LONGER SCREWS THAN THOSE FURNISHED.

DRILL PRESS ADJUSTMENTS . . . . Over extended periods of use, the gib strips may wear enough to allow a side (torque) movement of the drill on the drill press. To correct this, adjust the six gib adjustment screws for a firm, steady travel of the slide through the entire up and down range of the slide and rack. The adjustment is gauged by feel for an even slide drag over the complete travel range. On models having the Nylok type screws, do not remove the screws from the screw holes, as this will affect the locking feature of the Nylok screw.

ELECTRICAL SERVICING . . . . Electrical failures will normally require disassembly of the drill press to gain access to the electrical components. Check the physical wiring by referring to the wiring diagram. Consult your distributor or the factory for additional information.

ORDERING INFORMATION

When ordering a BUX Drill Press, it is necessary to specify the model number (L-2RP or L-3RP), operating voltage (120 or 220 volts), and BUX Drill Mounting Kit number. When ordering BUX Drill Mounting Kits or a Switch Box Assembly, specify manufacturer, size, model number, and/or the catalog number of the drill to be used. (Consult your BUX distributor for additional information.) When ordering repair parts, always include the model and serial number and operating voltage of your BUX Drill Press in addition to the part number listed in the parts list.

PARTS LIST

Index No.	Part No. L-2RP	Part No. L-3RP		Qty.
	2600	3600	DRILL STAND ASSY	
1	2103	3103	POST ASSY	1
2	1062	1062	SHACKLE Safety	1
3	3110	3110	RECEPTACLE ASSY (120V model)	1
	3325	3325	RECEPTACLE ASSY (220V model)	1
4	1076	1076	SCREW (AN515-8-4)	2
	3105	3105	SHAFT ASSY, Pinion	1
5	3142	3142	SHAFT, Pinion	1
6	2011	2011	GEAR, Pinion	1
7	2012	2012	PIN, Roll (ESNA)	1
8	3116	3116	SEAL, "O" Ring	1
9	3122	3122	WASHER, Shim	1
10	3118	3118	NUT, Cap	1
11	1041	3041	ROD, Handle	4
12	1042	1042	BALL, Handle	4
13	1110	1110	RECTIFIER (120V model)	1
14	3109	3109	BRACKET, Rectifier mounting	2
	2210	2210	RECTIFIER (220V model)	
	2324	2324	BRACKET, Rectifier, top (220V model)	1
	2325	2325	BRACKET, Rectifier, bottom (220V model)	1
15	3120	3120	CAP ASSY, Vent	1
16	1144	1144	SCREW (MS35228-64)	3
17	1004	1004	SCREEN, Ventilator	2
18	2610	3047	STABILIZER LEG	1
19	1064	1064	NUT, Knurled	1
20	3117	3117	LAMPHOLDER ASSY	1
21	2110	2110	LAMP (120V model)	1
	2326	2326	LAMP (220V model)	1
22	3131	3131	LENS	1
23	1138	1138	SWITCH, Toggle	1
24	1117	1117	PLATE, Switch Indicator	1
25	1079	1079	SCREW (AN520-10-4)	2
26	1150	3062	STRIP, Gib, back	2
27	1061	3061	STRIP, Gib, side	2
28	1077	1077	SCREW, Brass (MS35245-33)	4
29	1124	1124	SCREW, Set Nylok	6-9
	2019	3019	SLIDE ASSY	1
30	2016	3016	RACK	1
31	1031	3031	SLIDE	1
32	1166	1166	SCREW (MS35270-62)	4-5
33	1018	1018	BAR, Torque, right	1
34	1017	1017	BAR, Torque, left	1
35	1158	1158	SCREW (AN501-10-7) (MS35270-63)	8
36	1124	1124	SCREW, Set	1
37	1180	3066	STRIP, Slide wear	2
38	1164	3064	BAR, Slide retainer	1
39	1165	3065	BAR, Slide retainer and stop	1
40	1144	1144	SCREW (MS35228-64)	14-20
	2500	3500	RADIAL POSITIONER ASSY	1
41	2512	3527	PLATE, Dead	1
42	1183	3073	SCREW, Cap (MS35299-7)	4
43	2513	3529	PLATE ASSY, Wear	1
44	1186	3523	SCREW, Flat hd	4
45	3515	3515	ALIGNING STUD	1
46	3520	3520	NUT, Locking (Flexloc 30FK-1414)	1
47	3519	3519	WASHER	1
48	3517	3517	CAM	1
	2501	2501	HANDLE ASSY	1
49	2509	2509	SHAFT	1
50	3503	3503	HANDLE	1
51	3524	3524	PIN, Roll (ESNA)	1
52	3507	3507	PIN, Roll (ESNA)	1
	2503	3508	MAGNET ASSY (120V model)	1
	2703	3708	MAGNET ASSY (220V model)	1
53	2504	3509	POLE PIECE	1
54	1074	7073	SCREW	1
55	2051	3051	COIL ASSY (120V model)	1
	2221	3227	COIL ASSY (220V model)	1
56	1102	3095	SEAL, "O" Ring	1
	1046	1046	CABLE, Power (120V model) (not shown)	1
	2246	2246	CABLE, Power (220V model) (not shown)	1
	3119	3119	BUSHING, Cord strain relief (HEYCO) (not shown)	1

BUCK Mfg. Co.
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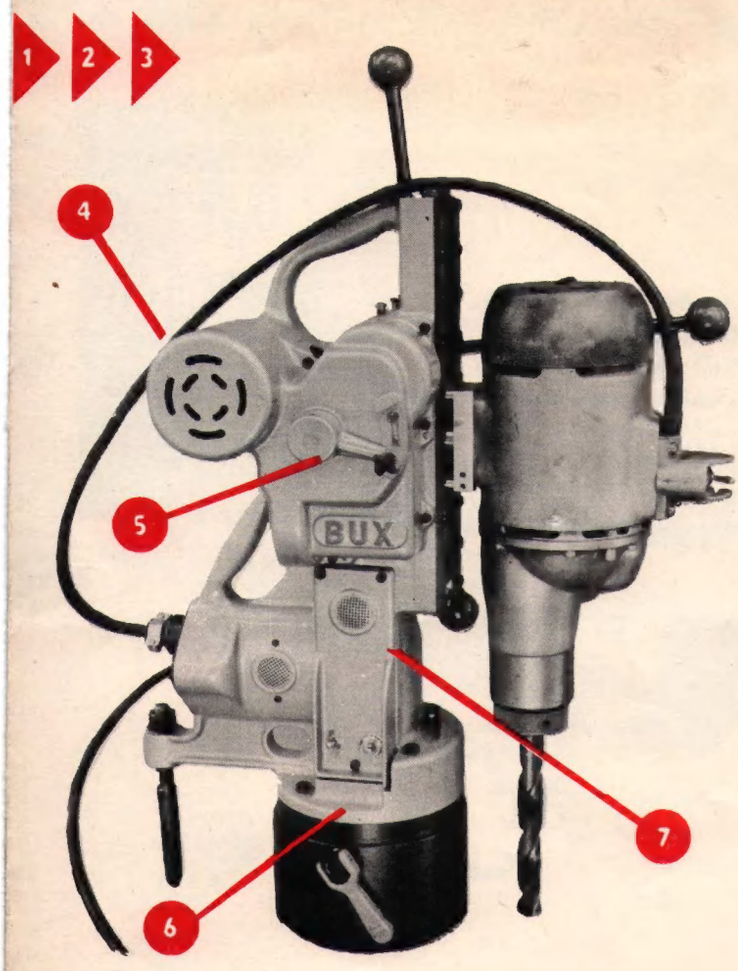
LITHO IN U.S.A. 4006



BUX-MATIC

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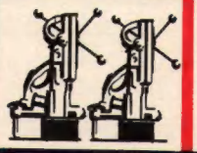
3			most comple line of mag- netic drill presses on th market.
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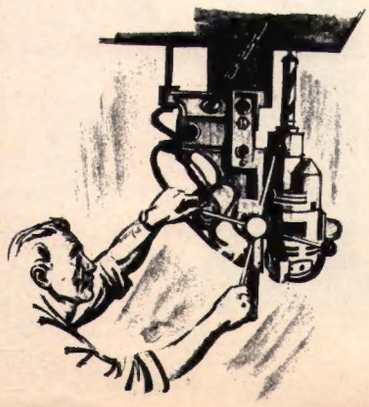
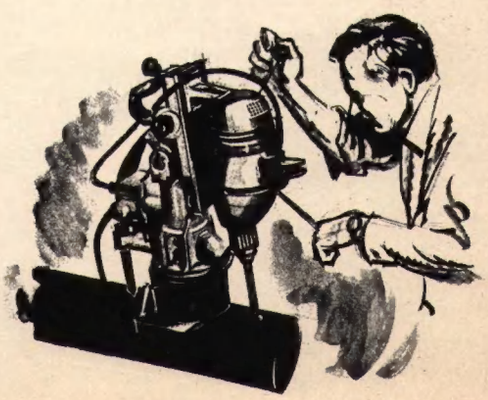
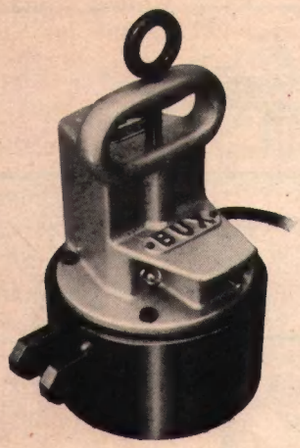
1/4" - 5/8"	1/4"-1"	3/8"-3/4"	19 1/2"	6"	36	1600	800	43	10"	—	—
1/2"-7/8"	1/2"-1"	1/2"-5/8"-7/8"	19 1/4"	6"	38	2000	1400	45	10"	—	—
3/4"-1 1/4"	1"-1 3/4"	5/8"-3/4"-1 1/4"	24"	6 3/4"	51	3000	2000	60	13"	—	—
1/2"-7/8"	1/2"-1"	1/2"-7/8"	20"	6"	43	1850	1250	45	10"	330°	7/8
3/4"-1 1/4"	1"-1 3/4"	5/8"-1 1/4"	24 3/4"	6 3/4"	57	2700	1850	60	13"	330°	1 1/8
1/2"-1 1/4"	1/2"-1 3/4"	5/8"-1 1/4"	24"	6 3/4"	70	3000	2000	150	12 1/2"		
1/2"-1 1/4"	1/2"-1 3/4"	5/8"-1 1/4"	25"	6 3/4"	77	3000	2000	150	12 1/2"	330°	1



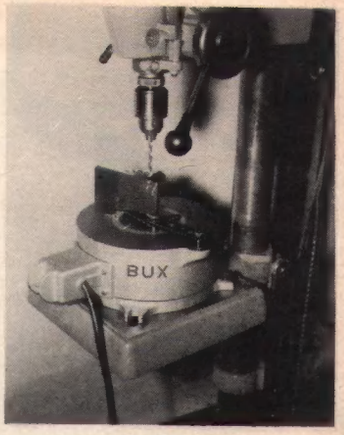




MORE POUNDS HOLDING - POWER PER SQUARE INCH

BUX portable Magnetic Plate Clamps feature powerful electro-magnets with a holding capacity up to 6000 lbs. Light weight, rugged and portable, these magnetic plate clamps will save valuable shop time in positioning work accurately, and faster than a regular hand operation.

Another BUX product is an Electro-magnetic Drill Vise that holds small ferrous metal parts securely to drill press bed, eliminating the use of chucks and clamps.



FORM NO. 4400 - R1
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